

**PRELIMINARY**  
 Notice ; This is not a final specification.  
 some parametric limits are subject to change.



MITSUBISHI SOUND PROCESSOR

**M62494SP/FP**

SOUND CONTROLLER FOR TV

# SRS 3D Stereo + SRS 3D Mono 1Chip

## OUTLINE

M62494 has SRS 3D STEREO and SRS 3D MONO.  
 There are three modes, those are SRS 3D stereo  
 SRS 3D mono and bypass.  
 Each mode can be set by terminals.

## FEATURE

- Each mode can be set by terminals.
- Mute Function

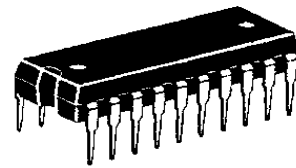
## APPLICATION

- TV , Mini-Stereo , etc

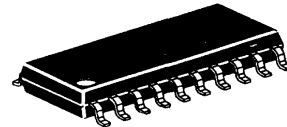
## RECOMMENDED OPERATING CONDITION

- Supply voltage range 6 ~ 9.5V
- Rated supply voltage 9V

## PACKAGE OUTLINE

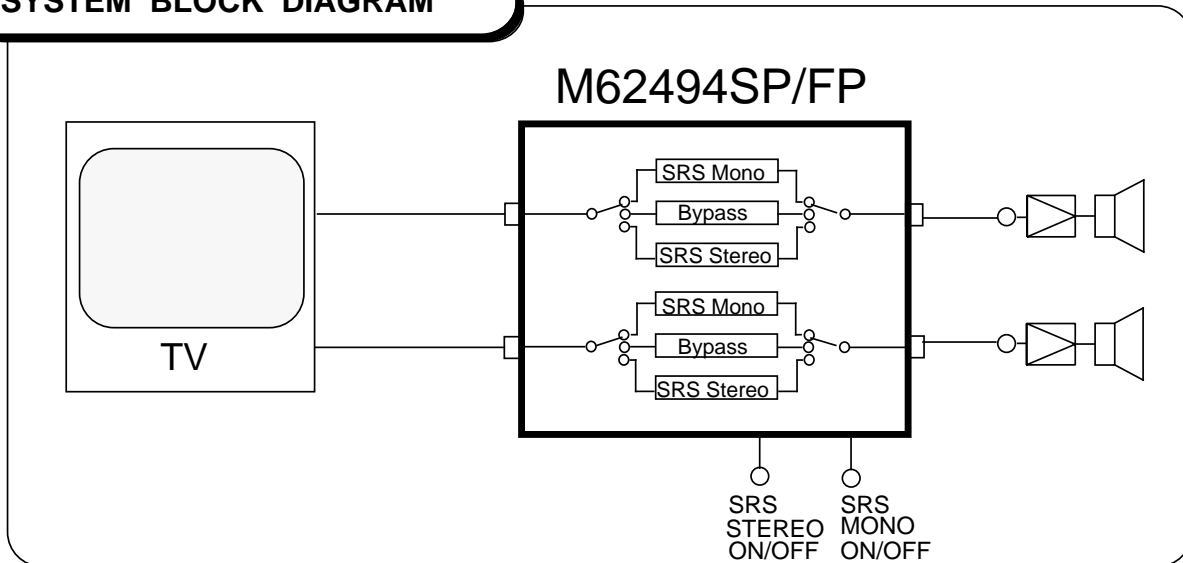


20P4B(SP)



20P2N(FP)

## SYSTEM BLOCK DIAGRAM



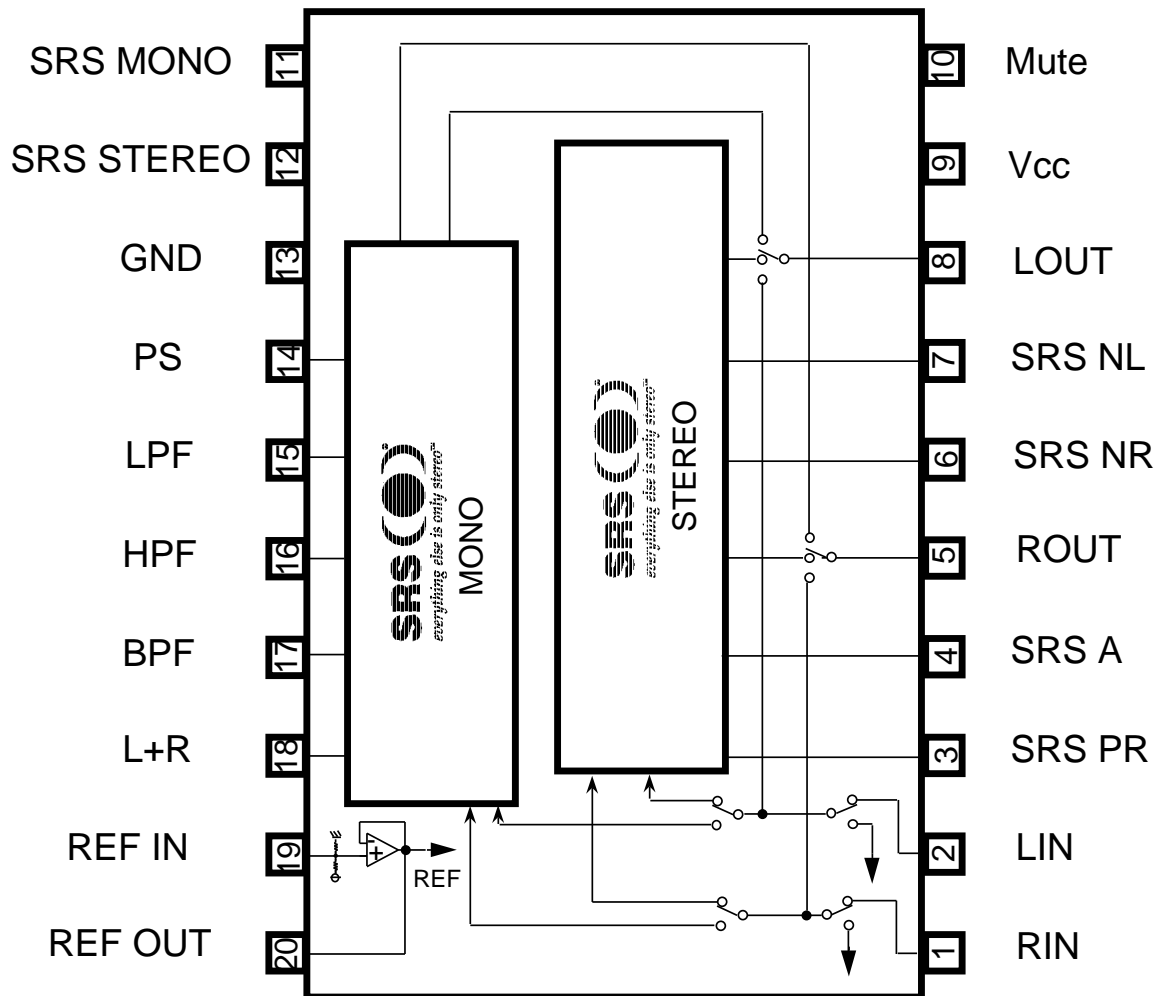
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**Block Diagram**



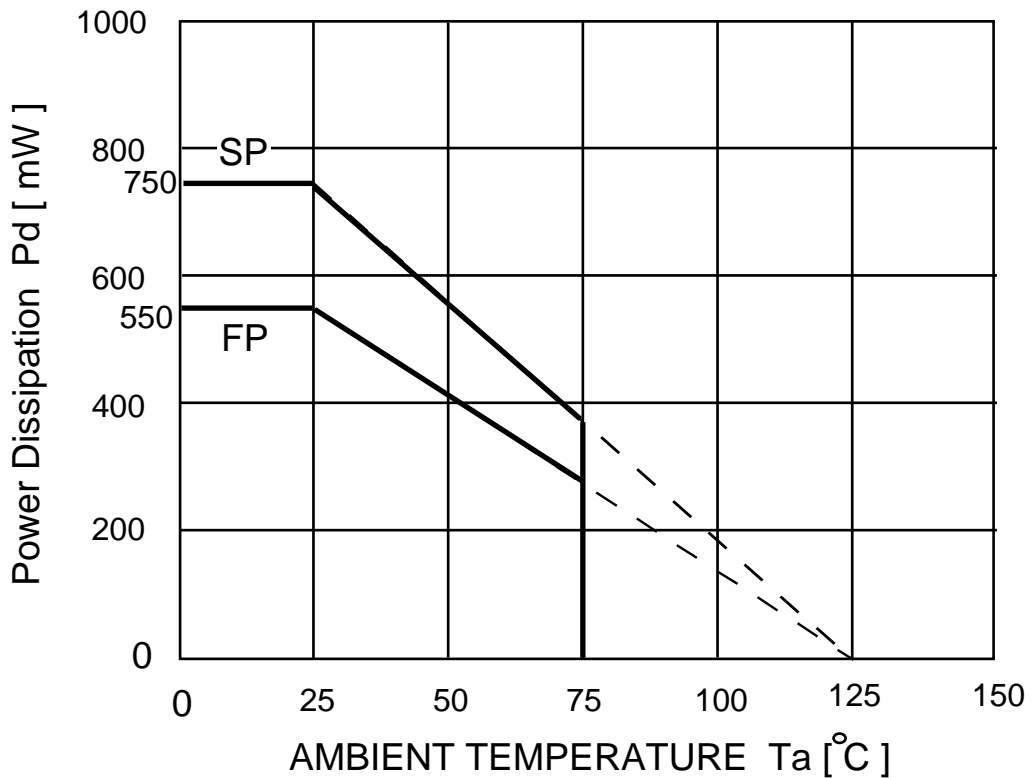
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**ABSOLUTE MAXIMUM RATINGS**

Symbol	Parameter	Conditions	Ratings	Unit
Vcc	Supply Voltage		13.0	V
Pd	Power Dissipation	Ta 25	750(SP)/550(FP)	mW
Kθ	Thermal Derating	Ta>25	7.5(SP)/5.5(FP)	mW/°C
Topr	Operating Temperature		-20 ~ 75	°C
Tstg	Storage Temperature		-40 ~ 125	°C

Thermal Derating



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## RECOMMENDED OPERATING CONDITION

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
Vcc	Supply Voltage		4.5	9.0	12.0	V
V <sub>IH</sub>	High Level Input Voltage	Pin-10,11,12	2.1	—	Vcc	V
V <sub>IL</sub>	Low Level Input Voltage	Pin-10,11,12	0	—	0.8	V

## ELECTRICAL CHARACTERISTICS

### (1) Power Supply Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I <sub>cc</sub>	Circuit Current		—	16	35	mA

### (2) -1 Input / Output Characteristics (V<sub>cc</sub>=9V, T<sub>a</sub>=25°C, V<sub>i</sub>=500mV<sub>rms</sub>, pin 10=0V)

Symbol	Parameter	Conditions		Conditions	Limit			Unit
		Input	Output		Min.	Typ.	Max.	
G <sub>v1</sub>	Input - Output Voltage Gain1	pin1,2 f=1kHz	pin5,8 RL=10K	Bypass (pin11,12=0V)	-3	0	+3	dB
G <sub>v2</sub>	Input - Output Voltage Gain2	pin1,2 f=1kHz	pin5,8 RL=10K	SRS Stereo (pin12=5V/pin11=0V)	-0.5	+2.5	+5.5	dB
G <sub>v3</sub>	Input - Output Voltage Gain3	pin1,2 f=100Hz	pin5,8 RL=10K	SRS Stereo (pin12=5V/pin11=0V)	+7	+10	+13	dB
G <sub>v4</sub>	Input - Output Voltage Gain4	pin1,2 f=100Hz	pin 8 RL=10K	SRS Mono (pin12=0V/pin11=5V)	+4.5	+7.5	+10.5	dB
G <sub>v5</sub>	Input - Output Voltage Gain5	pin1,2 f=10KHz	pin 8 RL=10K	SRS Mono (pin12=0V/pin11=5V)	+2.5	+6	+9.5	dB
V <sub>OM</sub>	Maximum Output Voltage	pin1,2 f=1kHz	pin5,8 THD=1% IHF-A filter RL=10K	Bypass (pin11,12=0V)	1.8	2.2	—	V <sub>rms</sub>
THD	Total Harmonic Distortion	pin1,2 f=1kHz V <sub>i</sub> =0dBm	pin5,8 DIN-A filter RL=10K	Bypass (pin11,12=0V)	—	0.01	0.05	%
MUTE	MUTE	pin1,2 f=1kHz V <sub>i</sub> =0dBm	pin5,8 IHF-A filter RL=10K	Mute (pin10=5V/pin11,12=0V)	—	55	45	dB

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(Vcc=9V, Ta=25°C, pin 10=0V)

Symbol	Parameter	Conditions		Conditions	Limit			Unit
		Input	Output		Min.	Typ.	Max.	
VNO1	Output Noise Voltage1		IHF-A filter	Bypass (pin11,12=0V)	—	3	10	μVrms
VNO2	Output Noise Voltage2		IHF-A filter	SRS Stereo (pin12=5V/pin11=0V)	—	30	100	μVrms
VNO3	Output Noise Voltage2		IHF-A filter	SRS Mono (pin12=0V/pin11=5V)	—	30	100	μVrms

## Switch Condition and the Mode

⑩ Mute	Mute Switch
ON	H
OFF	L

⑪ SRS MONO	SRS MONO Switch
ON	H
OFF	L

⑫ SRS STEREO	SRS ON/OFF Switch
ON	H
OFF	L

\* Bypass mode can be set by both SRS STEREO switch and SRS MONO switch are set to "L".

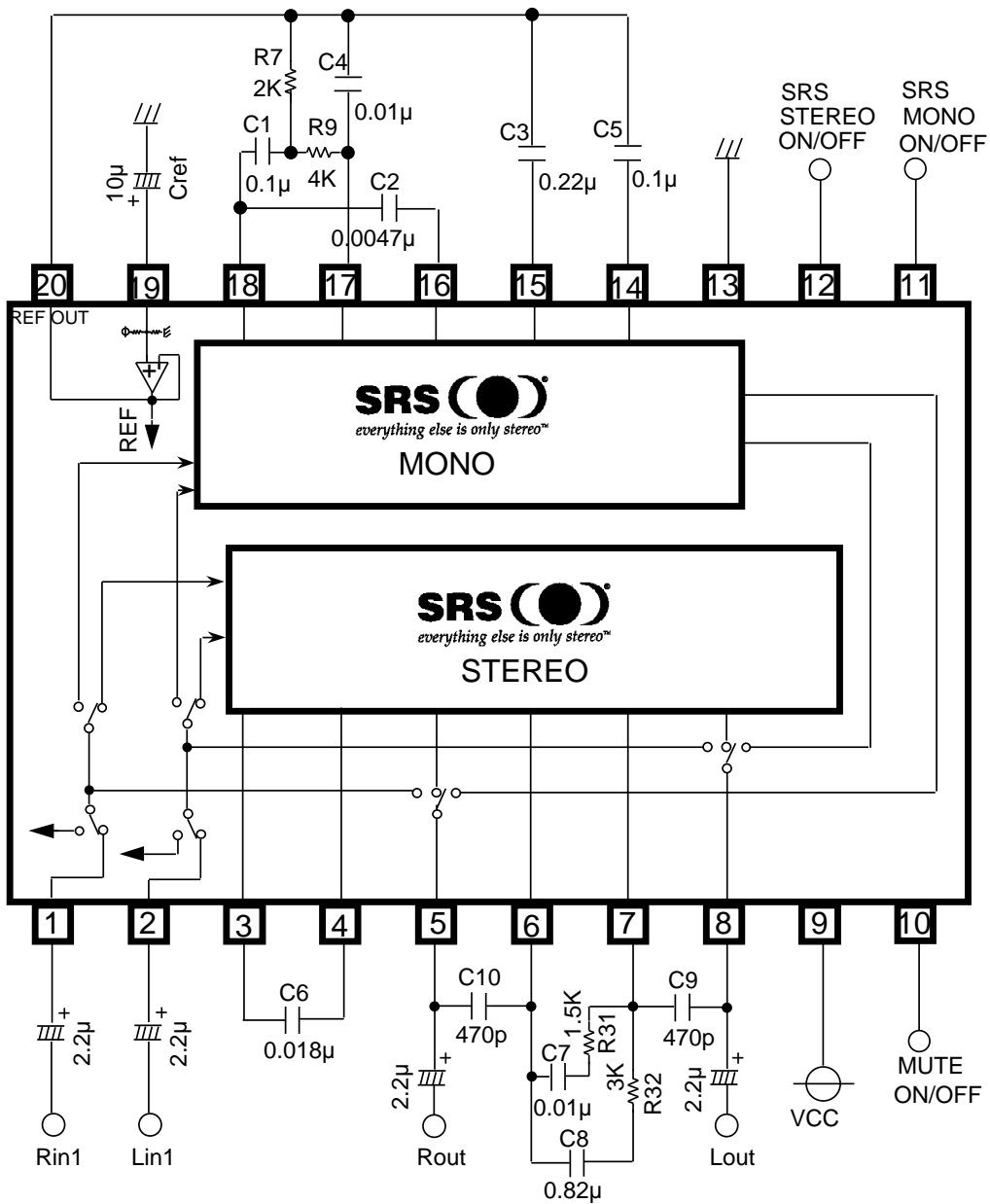
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## ● SRS Stereo/Mono/Bypass Version



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**NOTE**

Each switches (SRS ON/OFF, SRS MONO ON/OFF Switches) does not have the countermeasure for click noise, so that we recommend outside mute circuit.

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